

Patent Claims

1 1. An electric steering and drive system for a
2 vehicle having a wheel-based steering system, having
3 drive elements for traction tracks (15, 16) or for wheels
4 and having two drive shafts (13, 14), the first end of
5 which is connected to the drive element (15; 16) of the
6 respective one vehicle side and the second end of which
7 is connected to a differential gear mechanism arrangement
8 (17), and at least one traction motor (1, 2, 3, 4) is
9 connected to at least one of the two drive shafts (15,
10 16), and having an electric steering drive (9, 10) which
11 is drive-connected to the differential gear mechanism
12 arrangement (17), characterized in that the traction
13 motors and steering drives can be supplied with electric
14 current from at least two energy sources (19, 20, 21)
15 which are independent of one another.

1 2. The electric steering and drive system as claimed
2 in claim 1, characterized in that the traction drive
3 and/or the steering drive comprise/comprises at least two
4 electric motors (9, 10) or one electric motor having at
5 least two current circuits which are independent of one
6 another.

1 3. The electric steering and drive system as claimed
2 in claim 1, characterized in that the steering drive
3 comprises at least two electric motors (9, 10) or one
4 electric motor having at least two current circuits which
5 are independent of one another, and in each case at least

6 one electric traction drive (1, 2, 3, 4) is provided for
7 both drive shafts (15, 16) of the vehicle.

1 4. The electric steering and drive system as claimed
2 in claim 1, characterized in that the steering drive
3 comprises an electric motor (9) and in each case one
4 electric traction drive is provided for both drive shafts
5 (13, 14) of the vehicle, which electric traction drive
6 comprises in each case at least two electric motors (1,
7 2; 3, 4) or one electric motor having at least two
8 current circuits which are independent of one another.

1 5. The electric steering and drive system as claimed
2 in claim 2, characterized in that in each case one
3 electric traction drive is provided for both drive shafts
4 (13, 14) of the vehicle, which electric traction drive
5 comprises in each case at least two electric motors (1,
6 2; 3, 4) or one electric motor having at least two
7 current circuits which are independent of one another.

1 6. The electric steering and drive system as claimed
2 in one of the preceding claims, characterized in that at
3 least one generator (20) is provided for the generation
4 of electric current, which generator (20) is driven by at
5 least one internal combustion engine (19).

1 7. The electric steering and drive system as claimed
2 in one of the preceding claims, characterized in that at
3 least one fuel cell or one energy store (21) is provided
4 as electric current source.

1 8. The electric steering and drive system as claimed
2 in one of the preceding claims, characterized in that
3 fireproof bulkheads are provided between the different
4 part motors of a traction drive (1, 2; 3, 4) and/or of
5 the steering drive (9, 10) or between the different
6 current circuits of the traction drives and/or of the
7 steering drive.

1 9. The electric steering and drive system as claimed
2 in one of the preceding claims, characterized in that
3 mechanical friction brakes (22) which can be actuated
4 separately from one another are provided on the drive
5 shafts (13, 14).

1 10. The electric steering and drive system as
2 claimed in claim 9, characterized in that a further
3 independent energy source is provided for actuating the
4 friction brakes (22).